

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently amended): A volume holographic digital data storage system comprising:

a light source for generating a laser beam;

a beam splitter for separating the laser beam into a signal beam and a reference beam;

a spatial light modulator for modulating the signal beam into binary pixel data on a page-by-page basis based on data inputted from outside;

a beam selecting means for transmitting a selected portion of the reference beam to thereby provide a reduced reference beam;

a lens for ~~deflecting~~ refracting the reduced reference beam into a storage medium; and

a reflecting means for reflecting the reduced reference beam received from the beam selecting means toward an incident location on the lens.

2. (Original): The system of claim 1, wherein the beam selecting means includes:

an iris having a transmission region for transmitting only the selected portion of the reference beam, thereby providing the reduced reference beam and a non-transmission region for absorbing or reflecting the remainder portion of the reference beam; and

a first actuator for changing the position of the transmission region of the iris to change the incident location.

3. (Original): The system of claim 2, wherein the reflecting means includes:

a first reflection mirror for reflecting the reduced reference beam received from the iris; and

a second reflection mirror for reflecting the reduced reference beam received from the first reflection mirror toward the lens.

4. (Original): The system of claim 3, further comprising a second actuator for altering a position of the second reflection mirror.

5. (Currently amended): The system of claim 4, wherein the first actuator moves the iris on a two-dimensional plane, ~~to which is perpendicular to the~~ proceeding direction of the reduced reference beam toward the first reflection mirror ~~is perpendicular~~, and the second actuator moves the second reflection mirror with an incident angle of the reduced reference beam toward the second reflection mirror being unchanged.

6. (Original): The system of claim 3, further comprising a second actuator for altering a position of the first reflection mirror.

7. (New): A control method for a volume holographic digital data storage system of claim 1, comprising the steps of:

- (a) fixing the beam selecting means at a predetermined position;
- (b) recording an interference pattern of the signal beam and the reference beam;
- (c) moving the reflecting means while maintaining the position of the beam selecting means;
- (d) recording an interference pattern of the signal beam and the reference beam;

(e) repeating the steps (c) to (d) as long as the reference beam has an incident location distinguishable from that of the previously generated reference beams in order to satisfy an angular selectivity;

(f) changing the position of the beam selecting means; and

(g) repeating the steps (b) to (f) as long as the reference beam has an incident location distinguishable from that of the previously generated reference beams in order to satisfy an angular selectivity.

8. (New): A control method for a volume holographic digital data storage system of claim 1, comprising the steps of:

(a) fixing the reflecting means at a predetermined position;

(b) recording an interference pattern of the signal beam and the reference beam;

(c) moving the beam selecting means while maintaining the position of the reflecting means;

(d) recording an interference pattern of the signal beam and the reference beam;

(e) repeating the steps (c) to (d) as long as the reference beam has an incident location distinguishable from that of the previously generated reference beams in order to satisfy an angular selectivity;

- (f) changing the position of the reflecting means; and
- (g) repeating the steps (b) to (f) as long as the reference beam has an incident location distinguishable from that of the previously generated reference beams in order to satisfy an angular selectivity.